appreciatively reviewed in our columns (vol. x., p. 119) by the then greatest authority on the subject, the late Prof. Clerk Maxwell, so that it is unnecessary for us to analyse it here. Few of the readers of the recently published biography of Maxwell can have forgotten the humorous but accurately expressive lines in which he alludes to this work:—

> "And just as that living Plato, whom foreigners nickname Plateau,
> Drops oil in his whiskey and water—for foreigners sweeten it so:—
> Each drop keeps apart from the other, inclosed in a flexible skin,
> Till touched by the gentle emotion evolved by the prick of a pin," &c.

When we look at the Royal Society's Catalogue, we find that up to 1873 Plateau is credited with fifty-three papers on subjects of the most varied character. One large section of these, of course, forms the matter of the volumes already mentioned. Another large section is devoted to the persistence of visual impressions, subjective impressions of colour, irradiation, and other questions of physiological optics. In connection with these, there are several controversies and reclamations, with and against authorities such as Chevreul and von Helmboltz. In these contests, it must be confessed that Plateau usually has the worse. In fact, he appears very much in the same light as did Brewster a little earlier. He furnished to others, who knew how to interpret and to use them, a great array of novel facts: but his strength lay mainly in the patience and ingenuity which led him to these facts; not in the power of interpreting, explaining, or generalising them.

Besides the two main subjects above mentioned, we find in Plateau's *répertoire* a number of curiosities taken from widely different branches of science. Thus we have a chemical analysis of the mineral waters of Spa; the geometrical problem of describing an equilateral triangle whose several corners shall be on three given circles in one plane; arithmetical recreations; photometry; the "ghosts" produced by various series of rotating spokes; and a centrifugal air-pump.

Plateau occupied with success, until practically disabled, the Chair of Physics in the University of Ghent; and, if he did not attain to the foremost rank among experimental physicists, he at least did much good and useful work under circumstances which would have effectually closed the career of many men who have been more successful than he. He was occupied in his later years in compiling a valuable catalogue of all the papers he could meet with which bore on his special optical inquiries. It is to be hoped that the as yet unpublished part of this collection has been left in a state approaching completion.

OFFICIAL REPORTS ON CHOLERA IN EGYPT

SURGEON-GENERAL HUNTER, who was commissioned by the Government to make inquiry as to the circumstances attending the cholera epidemic in Egypt, has sent two reports to the Foreign Office. Neither pretends to afford full information on the subject which has been under investigation, but the more recent one, which gives information up to August 19, supplies some indication as to the opinion Dr. Hunter has formed with regard to the etiology of the epidemic. In his first report Dr. Hunter gives the cholera deaths registered up to July 31 as 12,600, but he adds that, owing to defective registration, the total mortality will probably be found to have been nearly double that number. Since that date some 15,000 more deaths have been registered, and if the same faulty system of registration has been maintained, the total mortality up to the present date cannot have fallen far short of some 55,000. The inquiry undertaken by Dr. Hunter relates therefore to a matter of the greatest magnitude, the more so as Egypt has apparently been free from cholera ever since 1865. It is however precisely this question of immunity from cholera that will be raised by Dr. Hunter, and already we are able to gather what opinion will be expressed on this point.

Thus, the possibility of the importation of the disease into Egypt from India is discussed, and it is stated that even some of those who originally were firmly convinced of this method of origin have been forced to a different conclusion. The spontaneous origin of the contagium is also regarded as not being supported by facts; and Dr. Sierra, in a communication which is appended to Dr. Hunter's, distinctly asserts that such a generation of the infection in the Nile Delta cannot be regarded as proved merely because the choleraic germ is often produced at the mouth of the Ganges. Prominence is, however, given to the fact that Egypt has been visited by five epidemics since that of 1831, namely, in 1848, 1850, 1855, 1865, and 1883, and independent testimony is brought forward to show that during the early part of the present year, as also at occasional intervals since 1865, there have been cases of a disease known as "cholerine," which have been characterised by some of the symptoms of true cholera. And further, Dr. Hunter, in expressing an opinion as to these cases, says that he has arrived at the conclusion that many of them were "what in India we should call cholera."

A further step in the argument is embodied in a description of the filthy conditions under which the Egyptians live, and especially of the foul state of the Nile at Damietta and other places, both owing to the floating carcasses of animals who had died of bovine typhus and otherwise. Having regard to all these points, the report implies that a number of cases, which for the moment we may describe as sporadic cholera, have formed a somewhat continuous series of attacks ever since the 1865 outbreak, and that the potency of the infection for spread in an epidemic form was developed under the influence of the foul conditions which obtained immediately antecedent to the date of the last epidemic. This view is by no means a new one; it was specially dealt with in a series of papers which were brought before the Epidemiological Society in 1878, when the possibility of a "progressive development of the property of infectiveness" under favourable conditions was insisted on; and it is more than probable that, as regards some of the infectious diseases, it may turn out to be a true explanation of their origin.

It must, however, be borne in mind that in England, and indeed in all thickly peopled countries, cases which are clinically of a similar character constantly occur during the warmer months of the year; indeed, the term "English cholera" is of by no means infrequent occurrence in our mortality tables. And not only so, but Dr. Sierra, in arguing against the spontaneous development of the contagium under the conditions which were found at Damietta, says that the same "cosmo-telluric conditions" have appeared often enough at the mouth of the Nile, that the same accumulation of carcasses in the river has before now taken place, and yet that no cholera has broken out in Egypt. The evidence mainly needed with a view to support the theory which is foreshadowed in Dr. Hunter's reports, should go to point out what were the peculiar conditions which, during the past summer, led to the development of a special potency for mischief in a disease which is always more or less present. The subject is one of the greatest scientific interest, and we trust it will be fully dealt with in the final report.

NORDENSKJÖLD'S GREENLAND EXPEDITION

BARON NORDENSKJÖLD telegraphed as follows to the *Times* from Thurso on Friday night:—"An inland ice party started on July 4 from Auleitswik Fjord. When they were 140 kilometres east of the glacier border and 5000 feet above the sea level they were prevented by soft snow from proceeding with sledges. They sent the Laplanders further on snowshoes. These advanced 230

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kilometres eastwards over a continual snow desert to a height of 7000 feet. The conditions for a snow-free interior consequently did not exist here; but this expedition, during which men have reached for the first time the interior of Greenland, has given important results as to the nature of the interior of an ice-covered continent. Over the whole inland there is ice. There occur masses of fine dust, partly of cosmical origin, with the ice. The rest of the expedition, under the command of Dr. Nathorst, visited the north-western coast between Waigattel (?) and Cape York. The Esquimaux told our Esquimaux interpreter (Hans Christian, formerly of Capt. Hall's expedition) that two members of the American Polar Expedition had died, and the rest had returned to Littleton Island (Sofia). On August 16 the expedition sailed from Egedesmunde for the south, with rich collections, zoological, botanical, and geological. Short stays were made at Iviktit, Julianshaab, and Frederiksdal. We tried to proceed eastwards thrice through the sounds north of Cape Farewell and once along the coast, but were hindered by ice. We then went outside the ice field to 66° latitude, remaining constantly in sight of land, having twice in vain tried to find an ice-free shore more to the south. The band of drift ice was forced south of Cape Dan. On September 4 we anchored in a fjord which had been newly visited by Esquimaux, and where we found some remains from the Norse period. It was the first time since the fifteenth century that a vessel had succeeded in anchoring on the east coast of Greenland south of the Polar Circle. We tried in vain to anchor in another fjord more to the north, and returned. The expedition arrived at Reikiavik (Iceland) on September 9. Our observations on the temperature of the sea prove that the cold current which packs the ice along the east coast of Greenland is very insignificant; that the glaciers of the east coast are few and of no great size; and that the fjords are free from ice. Probably the coast may be reached by suitable steamers in the autumn of most years."

It will thus be seen that for once Baron Nordenskjöld has failed to fulfil his predictions. But his expedition must be regarded as in all respects successful. He has succeeded in penetrating into the very heart of Greenland, and the idea of taking Lapps with him to skate their way over the rough ice-bound land was a happy one. Greenland thus appears to be what has always been conjectured, a land everywhere covered with a thick ice-sheet. We cannot gather from the telegram whether Nordenskjöld's theory as to the position of the old Norse settlements has been confirmed, but he has, at all events, succeeded in bringing back remains of the old colonies. The analysis of the cosmical dust which has been collected will be eagerly looked for, and the detailed account of the collections made in Northern Greenland.

NOTES

MR. J. Y. BUCHANAN has been invited to accompany the expedition which sailed last week from the Thames to survey the route and lay the cables connecting Cadiz and the Canary Islands, and these islands with Senegal, on the west coast of Africa. During the laying of the cable from Lisbon to Madeira, over a route that had been carefully sounded, into what was believed to be close on 2000 fathoms, it suddenly parted. Soundings taken immediately revealed the existence of a bank with no more than 110 fathoms of water on it, which had been missed while surveying the route. Again, quite recently—indeed, during the last two weeks—the French exploring vessel *Talisman*, which has been investigating this part of the ocean with a numerous scientific staff, under the direction of the veteran Milne-Edwards, discovered another bank to the southward of the "Seine Bank," with as little as 70 fathoms on it. This bank was found to be about thirty miles long from east to west, and six miles broad from north to south. Apart from the special investigation of these banks, the survey of the line of route, which is carried out by two ships working in concert along a zigzag course, sounding every seven miles, must necessarily furnish much important information. Between Madeira and the Canary Islands lies the small group of the Salvage Islands, which may be said to be almost unknown. It is intended to carry the soundings round them, so as to determine whether they are connected with any of the new banks or with known land. It is also intended to land on the islands, from which interesting collections may be expected. In addition to the instruments ordinarily carried in the ships, Mr. Buchanan takes out a new sounding tube, constructed for use with the ordinary wire sounding apparatus. With it it will be possible at every station to secure a good sample of the mud and of the water from the bottom without altering the routine work of the ship. As the route crosses the mouth of the Mediterranean it will thus be possible to determine the extent to which the dense warm water which leaves that sea as a bottom current affects the density and temperature of the deep water of the North Atlantic in its neighbourhood. The ships to be used are the *Dacia* and the *International*, both belonging to the Telegraph Construction and Maritime Company.

IN a communication to the *Sonntags-Beiloge zur Norddeutschen Allgemeinen Zeitung* for September 16 Dr. Reichenow, the well-known ornithologist of the Berlin Museum, describes a new ostrich under the name of *Struthio Molybdophanes*. A living example is in the Zoological Gardens at Berlin, and others are expected at Cologne and Paris. The habitat of this species is stated to be the deserts of Somali Land and the Western Galla country, extending on the east coast of Africa from 10° N. lat. to the Equator.

THE United States steamer *Yantic* has, we regret to learn, failed to reach and rescue Lieut. Greeley and his observing party, who have been stationed at Lady Franklin Bay, in Kennedy Channel, about 81° N., since the summer of 1881. This at first sight looks as if there were little hope of the safety of the party, as they had only two years' provisions with them. But Sir George Nares, who knows the region intimately, writes to the *Times* to show that there is no reason for despair. He gives in detail his reasons for believing that Lieut. Greeley, when the relief ship failed to reach him in 1882, would, like a prudent leader, prepare for the worst and husband his provisions to the utmost. Moreover, he would probably be able to add considerably to his supply by hunting, and on the route southwards there are depots at various accessible points. So, even if another year should have to be spent in the north, there is good reason to hope for the ultimate safety of the party.

ACCORDING to the *Izvestia* of the Russian Geographical Society, the young Tashkend Observatory carries on very useful scientific work. Col. Pomerantseff and his assistants are not only engaged in the verification of those instruments which are used every year for determinations of latitudes and longitudes in Turkestan, and in the computation of the results; they also pursue independent work, such as the observation of the small planets Juno and Pallas; the observation of the last solar eclipse at Penjakent; of the stars eclipsed by the moon, which are given in the *Nautical Almanac;* magnetical and meteorological observations. These last were made in 1882, at twenty stations, out of which eight are first-rank stations, and that of Tashkend makes observations every hour.

THE prize of 500 francs presented by Prof. A. P. de Candolle for the best monograph on a genus or family of plants is announced as open for competition for 1884. Papers in Latin, French, German, English, or Italian should be sent to Prof. Alph. de Candolle, Geneva, before October 1, 1884.

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